

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P331351-830

Luminaire Tested: **SA2XXDIP-C675D725U830-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331351-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C675D725U830-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

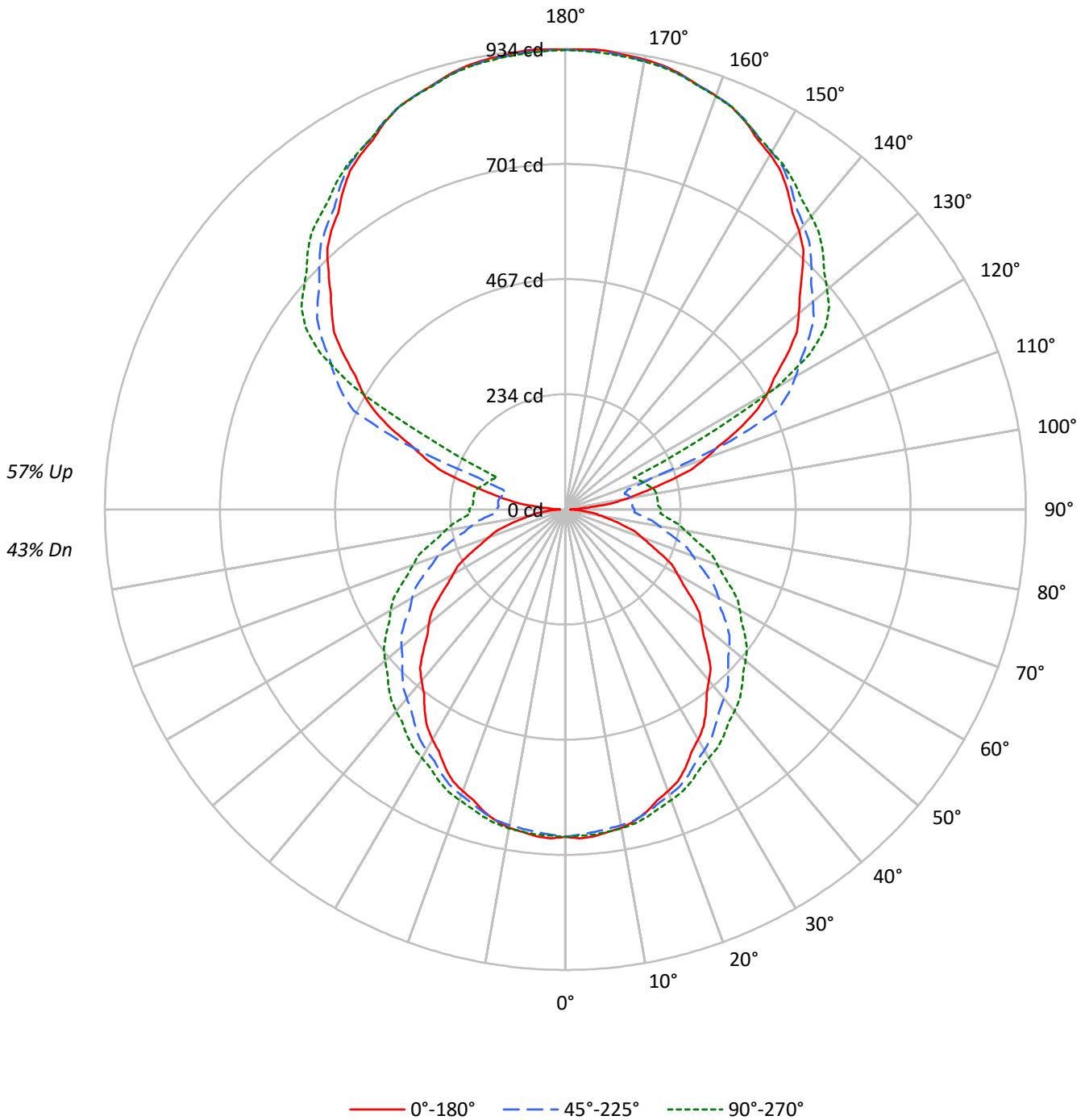
Lumens per Lamp: N/A
Luminaire Lumens: 5265.8 lumens
Efficiency: N/A
Efficacy: 114.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331351-830
CATALOG NUMBER: SA2XXDIP-C675D725U830-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P331351-830

CATALOG NUMBER: SA2XXDIP-C675D725U830-4F0-1E-UDD-D

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	105	105	105	105	96	96	96	96	79	79	79	64	64	64	49	49	49	43
1	95	90	86	82	86	82	78	75	68	65	62	54	52	50	42	40	39	33
2	86	78	71	66	78	71	65	61	58	54	51	47	44	41	36	34	32	27
3	78	68	60	54	71	62	55	50	51	46	42	41	37	34	31	29	27	22
4	71	60	52	45	64	55	48	42	45	40	35	36	32	29	28	25	23	19
5	65	53	45	39	59	49	41	36	40	35	30	32	28	25	25	22	19	16
6	60	47	39	33	54	44	36	31	36	30	26	29	25	22	22	19	17	14
7	55	43	35	29	50	39	32	27	33	27	23	26	22	19	20	17	15	12
8	51	39	31	25	46	36	28	24	30	24	20	24	20	17	19	16	13	11
9	48	35	28	22	43	32	26	21	27	22	18	22	18	15	17	14	12	10
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10719	10719	10719
5°	10771	10318	10278
10°	10704	10013	9900
15°	10557	9691	9503
20°	10370	9345	9120
25°	10186	9011	8772
30°	9928	8668	8421
35°	9665	8338	8176
40°	9388	8055	7929
45°	9124	7803	7719
50°	8843	7574	7511
55°	8548	7331	7300
60°	8188	7076	7078
65°	7811	6777	6812
70°	7390	6457	6525
75°	6853	6143	6262
80°	6004	5822	5995
85°	5192	5544	5785



TEST NUMBER: P331351-830

CATALOG NUMBER: SA2XXDIP-C675D725U830-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.9	1.2
10°-20°	180.4	3.4
20°-30°	273.4	5.2
30°-40°	333.0	6.3
40°-50°	358.2	6.8
50°-60°	347.9	6.6
60°-70°	303.7	5.8
70°-80°	233.8	4.4
80°-90°	159.2	3.0
90°-100°	139.2	2.6
100°-110°	192.9	3.7
110°-120°	356.8	6.8
120°-130°	532.0	10.1
130°-140°	547.1	10.4
140°-150°	499.3	9.5
150°-160°	399.7	7.6
160°-170°	257.6	4.9
170°-180°	88.7	1.7
0°-30°	516.7	9.8
0°-40°	849.6	16.1
0°-60°	1555.7	29.5
0°-90°	2252.5	42.8
90°-120°	689.0	13.1
90°-150°	2267.4	43.1
90°-180°	3013.0	57.2
0°-180°	5265.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	664	664	664	664	664	
5°	666	663	657	663	662	63
15°	635	637	637	645	645	179
25°	577	584	593	604	607	265
35°	498	514	532	552	560	311
45°	408	434	468	496	507	315
55°	313	348	397	431	444	279
65°	214	261	318	356	370	212
75°	118	173	234	274	288	125
85°	35	94	156	195	210	37
90°	10	74	140	181	195	8
95°	52	77	137	175	188	60
105°	210	248	124	163	178	225
115°	392	416	474	204	152	385
125°	550	561	602	632	644	491
135°	679	690	706	732	739	525
145°	787	787	798	808	810	492
155°	866	861	868	872	867	399
165°	913	909	911	915	911	258
175°	934	929	930	934	928	89
180°	932	932	932	932	932	



TEST NUMBER: P331351-830

CATALOG NUMBER: SA2XXDIP-C675D725U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9
2.5°	667.8	667.2	666.8	666.2	665.7	664.9	663.6	662.4	661.3	660.1	660.9
5°	665.8	665.2	664.6	663.9	663.3	662.3	661.0	659.8	658.5	657.1	658.5
7.5°	659.9	659.4	659.0	658.6	658.2	657.4	656.5	655.4	654.5	653.6	655.1
10°	655.3	654.8	654.4	653.9	653.6	653.0	652.3	651.8	651.1	650.4	652.1
12.5°	647.5	647.6	647.7	647.8	647.9	647.7	647.2	646.8	646.3	645.8	647.5
15°	635.1	635.5	635.9	636.3	636.8	637.0	637.0	637.0	637.0	637.0	638.9
17.5°	618.9	619.8	620.7	621.6	622.5	623.3	624.0	624.6	625.3	626.0	628.0
20°	608.1	609.2	610.2	611.3	612.4	613.3	614.2	615.1	616.0	616.8	619.2
22.5°	596.5	597.8	599.1	600.3	601.5	602.8	604.0	605.1	606.3	607.6	609.9
25°	577.3	578.8	580.3	581.8	583.3	585.0	586.9	588.9	590.8	592.7	595.3
27.5°	554.2	556.7	559.1	561.6	564.0	566.4	568.6	570.9	573.2	575.4	578.6
30°	538.9	541.6	544.4	547.1	550.0	552.7	555.5	558.3	561.1	563.8	567.2
32.5°	521.9	525.0	528.1	531.2	534.4	537.6	540.9	544.1	547.4	550.7	554.7
35°	497.5	501.1	504.7	508.3	512.0	515.9	519.9	524.0	528.0	532.1	536.8
37.5°	470.9	475.1	479.3	483.4	487.7	492.4	497.7	502.9	508.1	513.4	518.7
40°	453.2	457.9	462.6	467.3	472.0	477.2	483.1	488.8	494.6	500.3	505.9
42.5°	436.3	440.9	445.6	450.3	455.1	460.7	467.4	474.0	480.6	487.3	493.3
45°	407.9	413.8	419.5	425.3	431.0	437.7	445.2	452.7	460.1	467.6	474.3
47.5°	380.0	386.3	392.7	398.9	405.2	412.7	421.5	430.3	439.0	447.8	454.8
50°	360.8	367.5	374.1	380.7	387.3	395.5	405.1	414.7	424.3	433.9	441.2
52.5°	342.3	349.3	356.3	363.3	370.2	378.8	388.9	399.1	409.2	419.3	426.8
55°	312.7	320.4	328.1	335.8	343.5	352.9	364.0	375.1	386.3	397.4	405.1
57.5°	283.4	292.2	300.9	309.5	318.2	328.2	339.5	350.8	362.2	373.5	381.8
60°	262.7	271.8	281.1	290.3	299.4	310.2	322.3	334.5	346.7	358.9	367.0
62.5°	244.2	253.7	263.3	272.8	282.4	293.2	305.4	317.5	329.8	342.0	350.6
65°	213.6	224.0	234.6	245.1	255.5	267.0	279.7	292.3	304.9	317.5	326.3
67.5°	185.5	196.4	207.5	218.4	229.3	241.2	254.1	267.0	279.9	292.8	301.7
70°	165.5	176.6	187.8	198.9	210.0	222.2	235.4	248.6	261.9	275.2	284.4
72.5°	147.0	158.4	169.9	181.4	192.8	205.3	218.8	232.1	245.6	259.0	268.1
75°	118.4	130.4	142.3	154.3	166.3	179.1	192.7	206.4	220.1	233.8	243.0
77.5°	90.7	103.2	115.7	128.2	140.7	154.0	167.9	181.8	195.7	209.5	218.8
80°	72.2	85.2	98.2	111.3	124.3	137.8	151.7	165.6	179.5	193.4	202.4
82.5°	56.7	69.7	82.5	95.4	108.3	121.7	135.8	149.9	163.9	178.0	187.0
85°	34.7	47.9	61.2	74.4	87.7	101.1	114.8	128.5	142.2	155.9	164.9
87.5°	19.0	32.0	45.1	58.2	71.3	84.8	98.7	112.6	126.6	140.4	149.4
90°	10.3	24.3	38.4	52.4	66.4	81.0	95.9	110.7	125.6	140.5	149.8
92.5°	22.4	33.8	45.2	56.6	68.1	80.7	94.4	108.2	122.0	135.7	144.5
95°	51.6	56.6	61.7	66.8	71.9	81.4	95.3	109.1	123.1	137.0	145.8
97.5°	93.7	88.7	83.7	78.7	73.7	78.6	93.3	108.1	122.8	137.6	146.1
100°	126.1	113.5	100.9	88.2	75.6	76.5	91.0	105.6	120.2	134.7	143.7
102.5°	160.9	163.8	166.6	169.6	172.4	169.0	159.4	149.7	140.1	130.4	139.7
105°	209.8	220.5	231.2	241.9	252.6	243.0	213.2	183.4	153.6	123.9	133.0
107.5°	266.6	275.2	283.8	292.4	301.0	286.1	247.7	209.2	170.9	132.4	138.0
110°	302.6	310.0	317.4	324.8	332.2	319.5	286.7	253.9	221.0	188.2	180.1



TEST NUMBER: P331351-830

CATALOG NUMBER: SA2XXDIP-C675D725U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	337.1	343.5	349.8	356.2	362.6	365.4	364.7	363.9	363.2	362.5	314.6
115°	391.5	396.4	401.3	406.2	411.1	420.3	433.7	447.0	460.3	473.7	410.8
117.5°	439.2	443.7	448.0	452.4	456.8	464.8	476.2	487.7	499.2	510.6	500.2
120°	474.9	478.0	481.1	484.2	487.3	494.5	505.7	516.9	528.2	539.4	547.2
122.5°	505.0	507.7	510.5	513.2	515.9	522.7	533.7	544.7	555.6	566.7	573.5
125°	550.1	552.0	553.9	555.9	557.9	563.6	573.3	583.1	592.8	602.5	609.3
127.5°	591.7	593.7	595.6	597.6	599.6	604.4	612.0	619.6	627.3	634.9	641.7
130°	618.2	620.4	622.5	624.7	626.9	631.0	637.3	643.4	649.5	655.6	662.4
132.5°	645.2	647.0	648.8	650.6	652.4	655.9	661.0	666.1	671.3	676.4	682.7
135°	679.2	681.6	684.0	686.5	688.8	691.7	695.2	698.7	702.2	705.7	711.7
137.5°	714.7	716.3	717.9	719.6	721.2	723.3	725.8	728.2	730.7	733.2	738.6
140°	737.9	738.9	739.9	740.8	741.9	743.4	745.5	747.5	749.6	751.7	756.5
142.5°	757.3	758.2	759.0	759.9	760.8	762.2	764.2	766.1	768.1	770.1	774.0
145°	786.8	786.6	786.6	786.4	786.3	787.4	789.9	792.5	795.0	797.6	799.9
147.5°	813.4	812.8	812.3	811.7	811.2	812.1	814.6	817.1	819.6	822.2	823.1
150°	830.7	829.6	828.6	827.6	826.4	827.2	829.5	831.9	834.3	836.7	837.6
152.5°	845.2	844.0	842.9	841.7	840.6	841.1	843.4	845.6	847.9	850.2	851.1
155°	866.4	865.1	863.7	862.3	861.0	861.2	863.0	864.8	866.6	868.4	869.3
157.5°	883.0	881.8	880.7	879.6	878.4	878.4	879.8	881.0	882.2	883.5	884.6
160°	892.7	891.7	890.9	889.9	889.1	889.1	889.9	890.9	891.7	892.7	893.6
162.5°	901.4	900.4	899.6	898.6	897.7	897.7	898.4	899.2	900.0	900.8	901.8
165°	912.9	912.0	911.2	910.2	909.3	909.1	909.6	910.0	910.4	910.9	911.9
167.5°	921.5	920.7	919.7	918.9	917.9	917.7	918.1	918.5	919.0	919.4	920.4
170°	926.4	925.5	924.6	923.7	922.8	922.5	922.8	923.1	923.4	923.7	924.7
172.5°	929.6	928.7	927.8	926.9	926.0	925.8	926.0	926.3	926.6	926.9	928.0
175°	933.8	932.7	931.7	930.7	929.6	929.3	929.5	929.8	930.1	930.5	931.5
177.5°	934.5	933.7	932.8	932.0	931.1	930.8	930.9	931.0	931.1	931.2	932.1
180°	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8



TEST NUMBER: P331351-830

CATALOG NUMBER: SA2XXDIP-C675D725U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9
2.5°	661.8	662.6	663.5	663.7	663.4	663.1	662.7	662.4
5°	659.8	661.0	662.3	662.9	662.6	662.4	662.2	661.9
7.5°	656.6	658.2	659.7	660.3	660.2	659.9	659.7	659.5
10°	653.8	655.5	657.3	658.0	657.8	657.6	657.4	657.1
12.5°	649.2	650.9	652.7	653.4	653.2	653.0	652.8	652.5
15°	640.8	642.7	644.7	645.5	645.4	645.1	644.9	644.7
17.5°	630.0	632.1	634.0	635.1	635.1	635.1	635.1	635.1
20°	621.5	623.9	626.1	627.4	627.4	627.4	627.4	627.4
22.5°	612.3	614.6	616.9	618.3	618.6	619.0	619.3	619.6
25°	597.9	600.4	602.9	604.5	605.2	605.9	606.5	607.2
27.5°	581.9	585.1	588.4	590.2	590.7	591.2	591.6	592.1
30°	570.7	574.1	577.5	579.6	580.2	580.9	581.5	582.1
32.5°	558.6	562.6	566.5	569.0	570.2	571.4	572.5	573.6
35°	541.5	546.2	550.9	554.0	555.5	557.0	558.5	560.0
37.5°	523.9	529.0	534.3	537.7	539.3	540.8	542.4	544.0
40°	511.4	517.0	522.5	526.3	528.2	530.2	532.1	534.0
42.5°	499.4	505.5	511.5	515.6	517.5	519.4	521.3	523.2
45°	480.9	487.5	494.2	498.5	500.7	502.8	504.9	507.1
47.5°	461.7	468.6	475.5	480.1	482.5	484.8	487.2	489.6
50°	448.5	455.7	463.1	467.9	470.2	472.6	474.9	477.2
52.5°	434.2	441.7	449.1	454.1	456.6	459.1	461.7	464.2
55°	412.7	420.5	428.2	433.4	436.2	438.9	441.8	444.5
57.5°	390.1	398.4	406.7	412.3	415.1	417.9	420.8	423.6
60°	375.1	383.2	391.4	397.0	399.9	402.9	406.0	409.0
62.5°	359.2	367.9	376.5	382.3	385.0	387.9	390.7	393.5
65°	335.1	343.8	352.6	358.4	361.2	363.9	366.7	369.5
67.5°	310.6	319.4	328.3	334.2	337.1	340.0	342.9	345.8
70°	293.6	302.7	312.0	317.8	320.4	323.0	325.6	328.1
72.5°	277.1	286.1	295.1	301.1	304.3	307.4	310.4	313.5
75°	252.2	261.4	270.6	276.5	279.4	282.1	284.9	287.7
77.5°	227.9	237.0	246.2	252.2	255.2	258.3	261.2	264.2
80°	211.3	220.4	229.3	235.4	238.3	241.3	244.3	247.3
82.5°	196.0	204.9	214.0	219.8	222.6	225.5	228.3	231.1
85°	173.8	182.9	191.8	197.7	200.8	203.8	206.8	209.7
87.5°	158.3	167.1	176.0	181.8	184.6	187.4	190.2	193.0
90°	159.1	168.4	177.7	183.8	186.6	189.5	192.4	195.3
92.5°	153.3	162.0	170.8	176.5	179.3	182.1	184.8	187.6
95°	154.7	163.5	172.5	178.0	180.5	182.9	185.3	187.8
97.5°	154.6	163.1	171.6	177.2	179.9	182.7	185.3	188.0
100°	152.9	162.0	171.1	177.0	179.6	182.3	184.9	187.6
102.5°	148.9	158.3	167.5	173.6	176.3	179.1	181.9	184.6
105°	142.1	151.3	160.4	166.5	169.4	172.4	175.3	178.2
107.5°	143.5	148.9	154.5	158.7	161.6	164.6	167.6	170.5
110°	171.9	163.8	155.7	153.1	156.0	159.0	161.9	164.9



TEST NUMBER: P331351-830

CATALOG NUMBER: SA2XXDIP-C675D725U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	266.8	219.0	171.2	148.7	151.6	154.4	157.2	160.0
115°	347.8	284.8	221.9	186.2	177.8	169.4	160.9	152.5
117.5°	489.7	479.3	468.8	447.0	413.7	380.4	347.1	313.9
120°	555.0	562.8	570.6	565.5	547.6	529.8	511.9	494.0
122.5°	580.4	587.3	594.2	596.7	594.8	592.9	591.0	589.1
125°	616.0	622.9	629.7	634.3	636.7	639.0	641.5	643.9
127.5°	648.6	655.3	662.2	666.7	668.5	670.5	672.5	674.5
130°	669.2	676.0	682.8	686.9	688.4	690.0	691.6	693.1
132.5°	689.1	695.5	701.8	705.8	707.4	708.9	710.5	712.0
135°	717.7	723.7	729.7	733.4	734.8	736.2	737.6	739.0
137.5°	743.9	749.4	754.8	758.0	758.9	759.9	760.8	761.8
140°	761.2	766.0	770.7	773.4	773.9	774.5	775.0	775.5
142.5°	778.0	782.0	786.0	788.2	788.4	788.8	789.2	789.6
145°	802.3	804.6	806.9	808.2	808.6	808.9	809.3	809.5
147.5°	824.1	825.0	826.0	826.4	826.2	826.1	826.0	826.0
150°	838.5	839.4	840.3	840.4	839.6	838.9	838.1	837.4
152.5°	852.0	852.9	853.8	853.8	852.8	851.8	850.8	849.8
155°	870.2	871.1	872.0	871.9	870.6	869.5	868.3	867.0
157.5°	885.5	886.6	887.6	887.5	886.4	885.1	884.0	882.9
160°	894.5	895.4	896.3	896.2	895.1	894.1	893.1	892.0
162.5°	902.8	903.8	904.8	904.7	903.4	902.1	900.9	899.6
165°	912.9	914.1	915.1	915.1	914.1	912.9	911.9	910.9
167.5°	921.5	922.6	923.6	923.4	922.1	920.8	919.4	918.0
170°	925.8	926.8	927.9	927.7	926.4	925.0	923.7	922.4
172.5°	929.1	930.1	931.1	930.9	929.6	928.3	926.9	925.6
175°	932.6	933.6	934.6	934.4	932.9	931.4	929.9	928.4
177.5°	932.9	933.8	934.6	934.5	933.4	932.4	931.2	930.2
180°	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8

(END OF REPORT)